

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed**1.1. Name of the Data, data collection Project, or data-producing Program:**

C-CAP Land Cover, Lower Columbia River Estuary, Oregon, Washington, 2009

1.2. Summary description of the data:

This data set consists of land cover derived from high resolution imagery and was analyzed according to the Coastal Change Analysis Program (C-CAP) protocol. The project area extends from the river's mouth to RM 145 below the Bonneville Dam and from the Columbia River to the historic floodplain boundary. This dataset was developed through a collaboration between the Lower Columbia River Estuary Partnership and the NOAA Office for Coastal Management.

1.3. Is this a one-time data collection, or an ongoing series of measurements?**1.4. Actual or planned temporal coverage of the data:****1.5. Actual or planned geographic coverage of the data:**

W: -159.790253, E: -159.290936, N: 22.234437, S: 21.867688

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Image (digital)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:**1.8.1. If data are from another observing system, please specify:**

2. Point of Contact for this Data Management Plan (author or maintainer)**2.1. Name:**

NOAA Office for Coastal Management (NOAA/OCM)

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

NOAA Office for Coastal Management (NOAA/OCM)

2.4. E-mail address:

coastal.info@noaa.gov

2.5. Phone number:

(843) 740-1202

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:**3.2. Title:**

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?**4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):****5. Data Lineage and Quality**

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Process Steps:

- 2010-07-16 00:00:00 - This dataset was created by Sanborn (www.sanborn.com) and NOAA OCM. This version of the classification is the High Resolution Land Cover (2009-era) for the Lower Columbia River. Summary: This section outlines the

classification procedure for the Lower Columbia River High Resolution C-CAP. This product was developed through a partnership between the Lower Columbia River Estuary Partnership (LCREP) and the NOAA Office for Coastal Management. The development process occurred in 2 phases. During Phase 1, Sanborn Solutions created a land cover dataset for the lower Columbia River estuary with an emphasis on estuarine and freshwater vegetation and habitats using classification scheme developed specifically for the needs of LCREP. NOAA OCM provided technical assistance and quality assurance services to LCREP and Sanborn. During Phase 2, NOAA OCM took LCREP's final product and retrofitted for addition to the high resolution C-CAP product line. The product was derived from high resolution 4 band digital imagery in combination with LiDAR elevation data. In addition to the primary data sources, many supporting datasets such as archived Landsat imagery, the NWI and a Hydrologic Influence Layer, were used to enhance the classification. The mapping methodology employed an object oriented (image segmentation) approach. Phase 1: The land cover data was generated via object oriented classification. Field data collection was performed by SWCA Environmental Consultants. Image objects (segments) formed the base unit for field data collection and analysis. Sanborn performed an initial automated classification using Classification and Regression Tree (CART) analysis. Additional modeling was performed at the segment level using eCognition. Features that could not be captured successfully through CART or Spatial Models were addressed through manual editing. The final MMU was 0.25 acres. Attributes for the LCREP product are as follows: 10 Coniferous Upland Forest; 11 Deciduous Upland Forest; 21 Coniferous Wetland Forest; 22 Deciduous wetland forest; 40 Upland Shrub-Scrub; 41 Wetland Shrub-Scrub; 50 Upland Herbaceous; 51 Wetland herbaceous; 60 Aquatic Bed; 70 Agriculture; 71 Tree farms; 80 Bare; 81 Mud; 82 Sand; 84 Rock; 90 Urban Impervious; 91 Open Space Developed; 93 Water Phase 2: NOAA OCM utilized the source imagery and the LCREP product to create a High Resolution C-CAP dataset. This involved several steps. 1) Impervious surfaces and Open Spaced Developed were remapped to finer minimum mapping unit (MMU). This involved resegmenting to a finer scale and applying threshold models. The impervious MMU was refined to 0.05 acres. 2) LCREP classes were crosswalked and/or consolidated to C-CAP classes. 3) Modeling in eCognition and Manual edits were applied to LCREP categories that did not exhibit a direct crosswalk. The map maintains a 0.25 acre MMU for non-impervious classes. Attributes for the final C-CAP product are as follows: 0 Background; 1 Unclassified; 2 Impervious; 3; 4; 5 Developed, Open Space; 6 Cultivated Crops; 7 Pasture/Hay; 8 Grassland/Herbaceous; 9 Deciduous Forest; 10 Evergreen Forest; 11 Mixed Forest; 12 Scrub/Shrub; 13 Palustrine Forested Wetland; 14 Palustrine Scrub/Shrub Wetland; 15 Palustrine Emergent Wetland; 16 Estuarine Forested Wetland; 17 Estuarine Scrub/Shrub Wetland; 18 Estuarine Emergent Wetland; 19 Unconsolidated Shore; 20 Bare Land; 21 Open Water; 22 Palustrine Aquatic Bed
- 2010-07-16 00:00:00 - Metadata imported

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 1.3. Is this a one-time data collection, or an ongoing series of measurements?
- 1.4. Actual or planned temporal coverage of the data
- 1.7. Data collection method(s)
- 3.1. Responsible Party for Data Management
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.3. Data access methods or services offered
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

<https://www.fisheries.noaa.gov/inport/item/48293>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:

NOAA Office for Coastal Management (NOAA/OCM)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

7.3. Data access methods or services offered:

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To

Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):

Office for Coastal Management - Charleston, SC

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.